IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES
Attorney Docket № 14541US02 (BU 3027)

In re Application of:

Haixiang Liang

Serial No.: 10/767,604

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For: OPERATIONAL ANALYSIS SYSTEM FOR A COMMUNICATION DEVICE

Examiner: CHEN, QING

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REPLY BRIEF

MS: APPEAL BRIEF-PATENTS
Commissioner for Patents
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Sir:

In accordance with 37 CFR 41.41, the Appellant submits this Reply Brief in response to the Examiner's Answer mailed on October 13, 2010, **with a two-month period of reply expiring on December 13, 2010**. Claims 9-13 and 19-46 are pending in the present Application. The Appellant has responded to the Examiner in the Examiner's Answer, as found in the following Argument section.

As may be verified in his Final Office Action dated April 19, 2010 ("Final Office Action"), the Examiner had previously rejected all pending claims 9-13 and 19-46.

Claims 9-13 and 39-41 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,823,004, by Abdelilah et al.[1]

Claims 19-38, 42-44 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,823,004, by Abdelilah et al., in view of U.S. Patent No. 6,467,052, by Kaler et al.[2]

Claim 45 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,823,004, by Abdelilah et al., in view of U.S. Patent No. 6,467,052, by Kaler et al., and further in view of U.S. Patent No. 5,353,243, by Read et al.[3]

To aid the Board in identifying corresponding arguments, the Appellant has used the same headings in the Argument section of this Reply Brief as the headings found in the Appellant's corresponding Brief on Appeal. The Brief on Appeal has a date of deposit of June 10, 2010.

STATUS OF THE CLAIMS

Claims 9-13 and 19-46 were finally rejected in the Final Office Action mailed April 19, 2010. Claims 1-8 and 14-18 were canceled without prejudice in the Appellant's

[1] *See* Final Office Action at pages 2-8.
[2] *See* Final Office Action at pages 8-30.
[3] *See* Final Office Action at pages 30-31.

amendment dated July 10, 2007. Pending claims 9-13 and 19-46 are the subject of this appeal.

ARGUMENT

The Appellant respectfully traverses the rejections of claims 9-13 and 19-46 at least based on the following arguments made in the Brief on Appeal.

I. Claims 9-13 and 39-41 Are Not Anticipated by Abdelilah

Claims 9-13 and 39-41 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Abdelilah. The Appellant stands by the arguments made in the corresponding sections of the Brief on Appeal as set forth in further detail below.

A. Rejection of Independent Claim 9

The Appellant stands by the arguments made in the corresponding section of the Brief on Appeal.

Additionally, the Examiner's Answer sets forth four arguments in response to the Appellant's arguments in the corresponding section of the Brief on Appeal.

The first two arguments in response to the Appellant's argument in the corresponding section of the Brief on Appeal relate to the Examiner's interpretation of the Appellant's "fully record" claim limitation.

For example, the Examiner's Answer states the following:

> However, paragraph [11] is the only paragraph in the specification that states "fully record[ing] real-time information (e.g., samples, data and commands) that is input to a real-time communication device." Nowhere in the specification does the Appellant explicitly state that *all* of the information arriving at one or both of the first input and the second input is

> recorded. At best, in Figure 1 and paragraphs [11] and [29] of the Appellant's disclosure, the Appellant only describes that samples, data, and commands are recorded by a real-time communication device.
>
> Second, the claims recite only "fully record" with not further clarification on the claim scope of the term "fully" as intended by the Appellant to cover. The claims are not limited to the scope of recording all of the information. Thus, as the claims are interpreted as broadly as their terms reasonably allow (see MPEP § 2111.01(I)), the interpretation of a broad limitation of "fully record" as recording samples, data, and commands and the like by one of ordinary skill in the art is considered to be reasonable by its plain meaning and/or in light of the specification.[4]

However, the Examiner's allegation that "the Appellant only describes that samples, data, and commands are recorded by a real-time communication device" mischaracterizes both the Appellant's specification and the claims. As cited by the Examiner, the Appellant's paragraph [11] states, for example, "[a]n aspect of the present invention fully records real-time information (**e.g.**, samples, data and commands) that is input to a real-time communication device over a period of time."[5] In other words, the Appellant's specification does not limit the information to be recorded to only samples, data and commands as alleged by the Examiner. Instead, samples, data and commands are **examples** of information that may be recorded. Nowhere in the Appellant's specification is there any disclosure that limits the recorded real-time information to **only** samples, data and commands.

Further, Appellant's independent claim 9 recites "a recording module processor communicatively coupled to the first input and the second input that operates to **fully**

[4] Examiner's Answer, Page 33, Lines 3-14 (emphasis in original).
[5] Appellant's Specification, Page 5, Lines 3-5 (emphasis added).

record input information arriving at one or both of the first input and the second input during real-time operation of the modem device for subsequent non-real-time analysis." As shown above, the language of Appellant's independent claim 9 does not limit the information to be recorded to only samples, data and commands. In fact, Appellant's independent claim 9 does not even mention samples, data and commands. As such, the Examiner's attempt to limit the Appellant's claim limitations to recording only samples, data and commands is clearly inconsistent with both the Appellant's explicit claim limitations and the disclosure of the Appellant's specification.

Additionally, the Appellant notes that Appellant's "fully record input information arriving at one or both of the first input and the second input during real-time operation of the modem device" limitation can be broken up into three parts: (1) what is being done, (2) to what is it being done, and (3) to what extent is it being done. "[R]ecord[ing]" defines what is being done. "[I]nput information arriving at one or both of the first input and the second input during real-time operation of the modem device" defines to what "record[ing]" is being done. "[F]ully" defines the extent the "record[ing]" is being done.

The Examiner's interpretation of the Appellant's claim limitation essentially ignores the "fully" limitation and then inappropriately limits what is being recorded. For example, the below table compares the actual claim limitation to the Examiner's interpretation of the Appellant's claim limitation:

	To what extent is it being done?	What is being done?	To what is it being done?
Actual Claim Limitations	fully	record	input information arriving at one or both of the first input and the second input during real-time operation of the modem device
Examiner Interpretation (Examiner's Answer, Page 33, Lines 11-14)		recording	samples, data, and commands and the like

As shown above, the Examiner's allegation that "fully record input information arriving at one or both of the first input and the second input during real-time operation of the modem device" may be broadly interpreted as "recording sample, data, and commands and the like" is clearly erroneous at least because it ignores the "fully" limitation and inappropriately limits the "input information arriving at one or both of the first input and the second input during real-time operation of the modem device" limitation.

Also, regarding the Examiner's allegations as to the "plain meaning" of the terms in the Appellant's independent claim 9, the Appellant notes that the term "fully" is defined in Merriam-Webster's Online Dictionary as "in a full manner or degree : COMPLETELY."[6] Synonyms for the term "fully" include "all," "completely," "entirely," "totally," "utterly," and "wholly," among others.[7] Antonyms for the term "fully" include "incompletely" and "partially," among others.[8] As such, given the plain meaning of the terms used in Appellant's independent claim 9, it is clear that the term "fully record input

[6] Merriam-Webster Online, "fully," http://www.merriam-webster.com/dictionary/fully.
[7] Merriam-Webster Online, "fully," http://www.merriam-webster.com/dictionary/fully.
[8] Merriam-Webster Online, "fully," http://www.merriam-webster.com/dictionary/fully.

information" sets forth that the input information is completely recorded (*i.e.*, **all** the input information is recorded).

Regarding the Examiner's third argument, after repeating the rejection previously provided in the Final Office Action and Advisory Action, the Examiner's Answer then states the following:

> Note that Abdelilah clearly discloses recording the data, samples, and commands of a modem and thereby, fully records input information arriving at one or both of the first input and the second input. Abdelilah's invention records real-time modem performance data, internal states of the modem, modem communication data, and modem startup and disconnect data, etc. during the life of a connection of the modem. Thus, one of ordinary skill in the art would readily recognize that the various pertinent data and information recorded are the data (modem performance data), samples (internal states of the modem), and commands (modem startup and disconnect data) of the modem.[9]

As quoted above, the Examiner alleges that "Abdelilah clearly discloses recording the data, samples, and commands of a modem"; however, as discussed above, Appellant's independent claim 9 does not recite "recording the data, samples, and commands of a modem." Instead, Appellant's independent claim 9 recites, among other things, "fully record input information arriving at one or both of the first input and the second input during real-time operation of the modem device." Further, as noted above, the Examiner's allegation that "fully record input information arriving at one or both of the first input and the second input during real-time operation of the modem device" may be broadly interpreted as "recording sample, data, and commands and the like" is clearly

[9] Examiner's Answer, Page 35, Lines 3-10.

erroneous at least because it ignores the "fully" limitation and inappropriately limits the "input information arriving at one or both of the first input and the second input during real-time operation of the modem device" limitation.

Additionally, as previously discussed in the Appellant's Brief on Appeal, Abdelilah merely teaches processing and storing **select** data related to diagnostics, modem performance and internal states.[10] Nowhere in Abdelilah is there any disclosure regarding **fully recording input information arriving at one or both of the first input and the second input**. Rather, Abdelilah identifies the select data that may be obtained, for example, at Column 9, Lines 33-61. More specifically, Abdelilah explicitly and repeatedly discloses that it merely captures "a selected type of data related to the performance of the modem responsive to a state transition."[11] One of ordinary skill in the art would readily understand that recording select data (*i.e.*, partially recording) is different than fully recording input information (*i.e.*, recording all input information).

Regarding the Examiner's fourth argument, the Examiner's Answer states the following:

> Fourth, the Examiner further submits that Abdelilah's invention is directed to monitoring the performance of a modem which may be able to obtain data in real-time. Abdelilah disclose that real-time modem performance data, internal states of the modem, modem communication data, and modem startup and disconnect data, etc. are recorded during the life of a

[10] *See e.g.*, Abdelilah, Abstract; Column 4, Lines 62-64; Column 5, Lines 14 and 24-30; Column 8, Lines 16-19, 30-31 and 63-66; Column 9, Lines 1-4, 10-11 and 33-43; and Column 10, Lines 6-7.
[11] *See e.g.*, Abdelilah, Column 5, Lines 28-30; Column 10, Lines 15-19; Column 12, Line 60; Column 13, Lines 26 and 41-42; Column 14, Lines 16-18; Column 15, Lines 35-37; Column 11, Lines 51-53; Column 17, Lines 46-48.

> connection of the modem. Thus, one of ordinary skill in the art would readily comprehend that **pertinent data and information related to the performance of the modem must be fully recorded** in order to provide a complete analysis of the performance of the modem at a later time. For further clarification, the Examiner also submits that in order for Abdelilah's invention to monitor the performance of a modem, **all data related to the performance of the modem must be recorded**. Otherwise, the manufacturer/user of the modem would not be able to completely monitor the performance of the modem and diagnose any performance problems of the modem due to insufficient performance data collected.[12]

As shown above, the Examiner explicitly acknowledges recording only pertinent data and information related to the performance of the modem, which is different than fully recording input information arriving at one or both of a first input and a second input during real-time operation of the modem device. More specifically, "pertinent data" and "information related to the performance of the modem" are different than "input information arriving at one or both of a first input and a second input during real-time operation of the modem device." Additionally, in the previous non-final Office Action, the Examiner explicitly acknowledges that Abdelilah only records relevant modem data.[13]

Further, with regard to the Examiner's allegation that "[f]or further clarification, the Examiner also submits that in order for Abdelilah's invention to monitor the performance of the modem, **all data related to the performance of the modem must be recorded**,[14] the Appellant notes that recording all data related to the performance of the modem is different than recording all input information arriving at one or both of a first

[12] Examiner's Answer, Page 35, Lines 11-22.
[13] October 27, 2009 Non-Final Office Action, Page 37, Line 22 - Page 38, Line 3.
[14] Advisory Action, Page 2, Lines 32-33 (emphasis added).

input and a second input during real-time operation of the modem device. More specifically, nowhere in Abdelilah is there any disclosure that its performance data includes all input information arriving at one or both of a first input and a second input during real-time operation of the modem device. Rather, Abdelilah explicitly and repeatedly defines performance data to be a selected type of data,[15] much of which is not even received at its inputs 310 and 315.[16]

Therefore, the Appellant maintains that at least the limitations "a recording module processor communicatively coupled to the first input and the second input that **operates to fully record input information arriving at one or both of the first input and the second input** during real-time operation of the modem device for subsequent non-real-time analysis," as set forth in Appellant's independent claim 9, are not anticipated by Abdelilah.

Accordingly, independent claim 9 is not anticipated by Abdelilah and is allowable. Furthermore, the Appellant reserves the right to argue additional reasons beyond those set forth herein to support the allowability of claim 9.

[15] *See e.g.*, Abdelilah, Column 5, Lines 28-30; Column 10, Lines 15-19; Column 12, Line 60; Column 13, Lines 26 and 41-42; Column 14, Lines 16-18; Column 15, Lines 35-37; Column 11, Lines 51-53; Column 17, Lines 46-48.
[16] *See e.g.*, Abdelilah, Column 9, Lines 33-61.

B. Examiner's Response to Arguments

The Appellant stands by the arguments made in the corresponding section of the Brief on Appeal. The Appellant notes that the Examiner's Answer does not specifically address any of the Appellant's arguments set forth in the corresponding section of the Appellant's Brief on Appeal.

Accordingly, independent claim 9 is not anticipated by Abdelilah and is allowable. Furthermore, the Appellant reserves the right to argue additional reasons beyond those set forth herein to support the allowability of claim 9.

C. Rejection of Dependent Claims 10-13 and 39-41

The Appellant stands by the arguments made in the corresponding section of the Brief on Appeal.

Additionally, the Examiner's Answer states the following with regard to Appellant's dependent claim 10:

> *see Column 9: 66 and 67 to Column 10: 1-5, "...the teachings of the present invention are particularly directed to environments in which both a primary path [command input] and a secondary path are available to the DSP memory 345 to provide for monitoring operations to occur in real time while a communication connections is active through the modem,"; Column 9: 33-37 "Performance information so obtained may include a variety of information including...call setup return codes (CSR CODE) such as those available on Microsoft Corporation's AT code #UD (UniModem diagnostic command specification) [modem control commands]...").* Note that Abdelilah's invention records performance information, via the primary path (command input), which includes call

> setup return codes (CSR CODE) such as those available on Microsoft's AT code #UD (UniModem diagnostic command specification) (modem control commands). Also note that Abdelilah clearly discloses "fully record" as discussed in the Examiner's response (I)(a) hereinabove.[17]

However, Abdelilah's primary path 315 is not a command input as alleged by the Examiner. Instead, Abdelilah teaches that "communications from applications executed on the host system 300 are conveyed on the primary path 315 to the modem 310 for transmission through the port 320 which, in the illustrated embodiment, provides a connection to the Public Switched Telephone Network (PSTN)." (Abdelilah, Column 7, Lines 46-51). In other words, the data transmitted on primary path 315 to modem 310 is the data to be transmitted over network 320, which is different than modem control commands. Further, regarding the Examiner's citation to CSR CODE, one of ordinary skill in the art would readily be able to ascertain that Abdelilah's mere disclosure of obtaining call setup return codes does not teach or suggest **fully recording modem control commands arriving at a command input**. More specifically, Abdelilah does not even specifically disclose a command input, let alone recording all of the modem control commands arriving at a command input.

Further, the Examiner's Answer states the following with regard to Appellant's dependent claim 11:

> *see Column 7: 37 and 38, "...the modem 310 is an internal modem device contained within the host system 300." And 44-55, "The host system 300 [personal computer] is coupled to the modem 310 through a primary path 315 [first input] which supports communication services utilizing the modem 310...Similarly, communications from a remote device [second device] by a server modem (not shown) are received from the PSTN*

[17] Examiner's Answer, Page 37, Lines 7-19 (emphasis in original).

> *through port 320 [second input] and provided to a destination application executing on the host system 300 by the modem 310."; Column 8: 3-7, "...references to the DSP memory 345 [memory device of the personal computer] associated with the DSP 340 refer to the memory or memories within the modem 310 which are utilized for data storage by the DSP 340 during communication operations of the modem 310 supporting an active connection.").* Note that Abdelilah's invention records the communication operations of the modem arriving from the host system (personal computer) and the remote device (second device) on the DSP memory of the modem which is contained within the host system. Also note that Abdelilah clearly discloses "fully record as discussed in the Examiner's response (I)(a) hereinabove.[18]

However, as shown above, Abdelilah's merely describes the host system 300 and a remote device communicating via a modem 310, which fails to teach fully recording input information arriving at a first input and a second input on a memory device of a personal computer. Further, the cited section of Abdelilah explicitly state that the "references to the DSP memory 345...refer to the memory or memories within the modem 310," which is different than a memory device of a personal computer.

Also, the Examiner's Answer states the following with regard to Appellant's dependent claim 12:

> *See Column 8: 3-7, "...references to the DSP memory 345 associated with the DSP 340 refer to the memory or memories within the modem 310 which are utilized for data storage by the DSP 340 during communication operations of the modem 310 supporting an active connection." and 36-39, "A secondary path 335 can also be provided through other means, for example, to provide for implementation of the systems and methods of the present invention where external modems are used to support the host system 300." and 53-62, "Accordingly, in preferred embodiments of the present invention, modem performance is monitored by a host system 300 containing an internal modem 310. Nonetheless, the benefits of the present invention may also be obtained in various other embodiments*

[18] Examiner's Answer, Page 39, Line 11 – Page 40, Line 3 (emphasis in original).

> *including those in which the secondary path 335 does not return to the same host as the primary path 315. A second host may be co-located or remote from the first host. In fact, a remote second host could be at a distant location monitoring a modem connection through the secondary path 335.*" Note that Abdelilah's invention provides an external modem as part of a second host (networked computer) to record the communication operations of the modem arriving from the host system and the remote device. Thus, one of ordinary skill in the art would readily comprehend that the external modem is functionally equivalent to the host system's modem and can be used to store modem data as well. Also note that Abdelilah clearly discloses "fully record" as discussed in the Examiner's response (I)(a) hereinabove.[19]

However, Abdelilah's disclosure of using a remote second host to monitor a modem connection does not teach a recording module processor of a modem device causing input information arriving at a first input from a first device and arriving at a second input from a second device to be fully recorded on a memory device of a networked computer. More specifically, nowhere in Abdelilah is there any disclosure of a processor within Abdelilah's modem 310 that causes the information arriving at first and second inputs of the modem 310 to be fully recorded at a networked computer's memory device.

Additionally, the Examiner's Answer states the following with regard to Appellant's dependent claim 39:

> *see Column 4: 20-26, "One known approach to evaluating modem performance is the use of AT commands [operating system (OS) device drivers], such as those provided for by operating system, such as Windows™ from Microsoft Corporation, for communicating with a modem (such as the #UD command). However, only a limited amount of diagnostic information may be obtained from a modem using this*

[19] Examiner's Answer, Page 41, Line 14 – Page 42, Line 10 (emphasis in original).

> *approach."; Column 7: 37 and 38, "...the modem 310 is an internal modem device contained within the host system 300."; Column 8: 3-12, "...references to the DSP memory 345 (hard drive of the personal computer] associated with the DSP 340 refer to the memory or memories within the modem 310 supporting an active connection. This memory may include a separate memory device coupled to the DSP 340 over the DSP bus 350 and may further include memory which is contained within the circuit device of DSP 340 which is nonetheless available over the DSP system bus 350.*"). Note that Abdelilah discloses using the operating system's AT commands (operating system (OS) device divers) to obtain diagnostic information from the modem. The obtained diagnostic information is stored in the DSP memory (hard drive of the personal computer) of the modem which is contained within the host system. Also note that Abdelilah clearly discloses "fully record" as discussed in the Examiner's response (I)(a) hereinabove.[20]

However, commands are not operating system device drivers as alleged by the Examiner. Further, as is well known in the art, AT#UD (i.e., unimodem diagnostics command) is in reference to a command that causes select diagnostic information to be logged (e.g., whether call setup failed, reason for call termination, etc.). The AT#UD command does not cause input information to be fully recorded, nor does it cause information to be directly written to a hard drive of a personal computer. In fact, Abdelilah explicitly teaches that "[h]owever, only a limited amount of diagnostic information may be obtained from a modem using this approach. Furthermore, the modem communication session typically must be terminated to obtain information using AT commands, which not only interrupts ongoing operations but further may limit the amount and types of data available from the modem, (for example, due to retraining

[20] Examiner's Answer, Page 44, Lines 6-22 (emphasis in original).

procedures overwriting various data within the modem)."[21] Additionally, as one of ordinary skill in the art would readily understand, even if a modem is internal to a personal computer, the modem DSP memory is clearly not a hard drive of the personal computer. As such, the cited sections of Abdelilah clearly cannot teach "wherein **the modem device operates to cause the input information to be fully recorded on the memory device of the personal computer** by, at least in part, **being driven as an operating system (OS) device driver of the personal computer to write the input information directly to a hard drive of the personal computer**," as set forth in Appellant's dependent claim 39.

Further, the Examiner's Answer states the following with regard to Appellant's dependent claim 40:

> *see Figure 3, 340 and 345; Column 8: 3-7, "...references to the DSP memory 345 [recording module processor] associated with the DSP 340 [integrated circuit of the modem device] refer to the memory or memories within the modem 310 which are utilized for data storage by the DSP 340 during communication operations of the modem 310 supporting an active connection."*). Note that Abdelilah discloses that the DSP memory (recording module processor) is associated with the DSP (digital signal processor)(integrated circuit of the modem device) which are utilized for data storage.[22]

However, nothing in Abdelilah teaches that its DSP memory 345 has any processing functionality. In other words, Abdelilah's DSP memory 345 is clearly not a processor, let alone a recording module processor. Additionally, as discussed above, Abdelilah

[21] Abdelilah, Column 4, Lines 23-30.
[22] Examiner's Answer, Page 45, Line 19 – Page 46, Line 5 (emphasis in original).

merely teaches processing and storing **select data** related to diagnostics, performance and internal states.[23] As such, Abdelilah clearly fails to teach "wherein the recording module processor is integrated into an integrated circuit of the modem device," as recited in Appellant's dependent claim 40.

Further, the Examiner's Answer states the following with regard to Appellant's dependent claim 41:

> *see Column 8: 15-20, "The DSP memory 345 further includes one or more first-in-first-out (FIFO) buffers 355, 360. The FIFO buffers 355, 360 implemented in DSP memory 345 are used to record state transitions made for one or more of the state machines of the modem 310 as will be described further later herein."*). Note that Abdelilah discloses that the DSP memory includes FIFO buffers which are used to record state transitions of the modem. Thus, one of ordinary skill in the art would readily comprehend that the FIFO buffers record the state transitions in the same sequence as the order of the modem's state transitions. Also note that Abdelilah clearly discloses "fully record" as discussed in the Examiner's response (I)(a) hereinabove.[24]

However, Abdelilah's state transitions (i.e., state changes of state machines internal to modem 310)[25] are not input information arriving at the first input and the second input. Further, nothing in the cited section of Abdelilah teach recording input information in the exact same sequence as received at the modem. As such, Abdelilah's disclosure of recording state transitions does not teach **fully recording the input information arriving at the first input and the second input**, let alone fully recording the input information **in the exact same sequence** as received at the modem device.

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[23] *See e.g.*, Abdelilah, Abstract; Column 4, Lines 62-64; Column 5, Lines 14 and 24-30; Column 8, Lines 16-19, 27-33 and 63-66; Column 9, Lines 1-4, 10-11 and 33-43; and Column 10, Lines 6-7.
[24] Examiner's Answer, Page 47, Lines 9-17 (emphasis in original).
[25] *See e.g.*, Abdelilah, Column 13, Lines 18-31.

Accordingly, the Appellant maintains that claims 10-13 and 39-41 are allowable over the reference cited in the Final Office Action at least for the above reasons. The Appellant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 10-13 and 39-41.

II. Claims 19-38, 42-44 and 46 Are Not Obvious Over Abdelilah in view of Kaler

Claims 19-38, 42-44 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Abdelilah in view of Kaler. The Appellant stands by the arguments made in the corresponding sections of the Brief on Appeal as set forth in further detail below.

A. Rejection of Independent Claims 19 and 27

The Appellant stands by the arguments made in the corresponding section of the Brief on Appeal.

The Examiner's Answer states that "Examiner respectfully submits that the Examiner has addressed the Appellant's arguments in the Examiner's response (I)(a) hereinabove."[26] The Appellant notes that the Examiner's arguments in section (I)(a) of the Examiner's Answer have been addressed above in section I.A. of the Appellant's Reply. As such, for at least the reasons set forth above and in the Appellant's Brief on

[26] Examiner's Answer, Page 49, Lines 1-2.

Appeal, the Appellant respectfully submits that Appellant's independent claims 19 and 27 are not unpatentable over Abdelilah in view of Kaler and are allowable.

Specifically, the Appellant maintains that Abdelilah merely teaches processing and storing **select data** related to diagnostics, performance and internal states[27] and Kaler merely teaches analyzing the performance of a data processing system.[28] Therefore, the combination of Abdelilah and Kaler fails to disclose "wherein the recording module **fully records the input information received at the modem** during real-time operation of the modem," as set forth in Appellant's independent claim 19; and, "while operating the modem in real-time, utilizing the recording module to **fully record input information input to at least the first and/or second inputs of the modem**," as set forth in Appellant's independent claim 27.

Accordingly, independent claims 19 and 27 are not unpatentable over Abdelilah in view of Kaler and are allowable. Furthermore, the Appellant reserves the right to argue additional reasons beyond those set forth herein to support the allowability of claims 19 and 27.

B. Examiner's Response to Arguments

The Appellant stands by the arguments made in the corresponding section of the Brief on Appeal. The Appellant notes that the Examiner's Answer does not specifically

[27] *See e.g.*, Abdelilah, Abstract; Column 4, Lines 62-64; Column 5, Lines 14 and 24-30; Column 8, Lines 16-19, 27-33 and 63-66; Column 9, Lines 1-4, 10-11 and 33-43; and Column 10, Lines 6-7.
[28] Kaler, Abstract.

address any of the Appellant's arguments set forth in the corresponding section of the Appellant's Brief on Appeal.

Accordingly, independent claims 19 and 27 are not unpatentable over Abdelilah in view of Kaler and are allowable. Furthermore, the Appellant reserves the right to argue additional reasons beyond those set forth herein to support the allowability of claims 19 and 27.

C. Rejection of Dependent Claims 20-26, 28-38, 42-44 and 46

The Appellant stands by the arguments made in the corresponding section of the Brief on Appeal.

Additionally, the Examiner's Answer again alleges that Kaler's mere disclosure of an animated application model remedies the deficiencies of Abdelilah to teach a bit-exact software model of the modem.[29] However, the cited section of Kaler merely discloses that Kaler's animated application model is capable of generating diagrams of the functionally active structure of the application,[30] which fails to teach a bit-exact software model of a modem or the operation of a modem. Nowhere in the combination of Abdelilah and Kaler is there any disclosure of a bit-exact software model of a modem or the operation of a modem. As such, the combination of Abdelilah and Kaler cannot teach "wherein the model of the modem comprises a bit-exact software model of the modem that, when executed produces results that are the same as an original modem

[29] Examiner's Answer, Page 50, Lines 7-21.
[30] Kaler, Column 32, Lines 28-34.

that the bit-exact software model is modeling," as set forth in Appellant's dependent claim 23; "wherein executing the model of the modem comprises executing a bit-exact software model of the modem," as recited in Appellant's dependent claim 34; "wherein the model of the modem comprises a bit-exact software model of the modem that exactly mimics the real-time operation of the modem," as set forth in Appellant's dependent claim 42; and, "wherein the playback module comprises playback software comprising a bit-exact model of the operation of the modem, such that any modem behaviors that occurred in real-time operation during the period of time over which the input information was obtained will recur during execution of the playback software in the non-real-time playback environment," as set forth in Appellant's dependent claim 46.

Further, with regard to the Appellant's dependent claim 28, the Examiner's Answer states that "Examiner respectfully submits that the Examiner has addressed the Appellant's arguments in the Examiner's response (I)(a) and (I)(c) hereinabove."[31] The Appellant notes that the Examiner's arguments in section (I)(a) and (I)(c) of the Examiner's Answer have been addressed above in section I.A. and I.C. of the Appellant's Reply. As such, for at least the reasons set forth above and in the Appellant's Brief on Appeal, the Appellant respectfully submits that Appellant's dependent claim 28 is not unpatentable over Abdelilah in view of Kaler and is allowable.

Also, the Examiner's Answer states the following with regard to Appellant's dependent claim 30:

[31] Examiner's Answer, Page 52, Lines 2-4.

> Abdelilah clearly discloses "**the second device is a computer** (*see Column 7: 51-55, "Similarly, communications from a remote device [second device] by a server modem (not shown) are received from the PSTN through port 320 and provided to a destination application executing on the host system 300 by modem 310.*"); **and utilizing the recording module comprises utilizing the recording module to fully record the input information to a memory device of the computer**" (*see Column 8: 3-7, "...references to the DSP memory 345 associated with the DSP 340 refer to the memory or memories within the modem 310 which are utilized for data storage by the DSP 340 during communication operations of the modem 310 supporting an active connection." And 36-39, "A secondary path 335 can also be provided through other means, for example, to provide for implementation of the systems and methods of the present invention where external modems [memory devices of the computer] are used to support the host system 300." And 53-59, "Accordingly, in preferred embodiments of the present invention, modem performance is monitored by a host system 300 containing an internal modem 310. Nonetheless, the benefits of the present invention may also be obtained in various other embodiments including those in which the secondary path 335 does not return to the same host as the primary path 315.*"). Note that Abdelilah discloses that the remote device communicates with the host system using server modem. Thus, one of ordinary skill would readily comprehend that the server modem must be contained within a computer. Also note that Abdelilah's invention provides an external modem, for example, the remote device's server modem, which can be used to record the communication operations of the modem arriving from the host system and the remote device. Thus, one of ordinary skill in the art would readily comprehend that the remote device's server modem is functionally equivalent to the host system's modem and can be used to store modem data as well. Further note that Abdelilah clearly discloses "fully record" as discussed in the Examiner's response (I)(a) hereinabove.[32]

However, even if Abdelilah's server modem could be considered a computer (which is unsupported by Abdelilah), nowhere in Abdelilah is there any disclosure that a recording module on Abdelilah's modem 310 is used to fully record the input information input to at least the first and/or second inputs of the modem 310 to a memory device of the

[32] Examiner's Answer, Page 53, Line 12 – Page 54, Line 14 (emphasis in original).

server modem. As such, the combination of Abdelilah and Kaler cannot teach "the second device is a computer; and utilizing the recording module comprises utilizing the recording module to fully record input information to a memory device of the computer," as recited in Appellant's dependent claim 30.

Additionally, the Examiner's Answer states the following with regard to Appellant's dependent claim 31:

> *see Column 8: 3-7, "...references to the DSP memory 345 associated with the DSP 340 [recording application program] refer to the memory or memories within the modem 310 which are utilized for data storage by the DSP 340 during communication operations of the modem 310 supporting an active connection.").* Note that as discussed in the Examiner's response (II)(d) hereinabove, Abdelilah's invention provides an external modem, for example, the remote device's server modem, which can be used to record the communication operations of the modem arriving from the host system and the remote device. Thus, one of ordinary skill in the art would readily comprehend that the remote device's server modem is functionally equivalent to the host system's modem and can be used to store modem data as well.[33]

However, it appears the Examiner is confusing Abdelilah's disclosure regarding its external modem implementation. Specifically, regarding the Examiner's comments in reference to Abdelilah's external modem, Abdelilah merely states that in a preferred embodiment modem 310 is an internal modem.[34] In other embodiments, modem 310 may be an external modem.[35] Nothing in Abdelilah teaches obtaining diagnostic data from any other modem, other than modem 310 (whether it is internal or external). Put simply, there is clearly no support in Abdelilah for the Examiner's allegation that

[33] Examiner's Answer, Page 55, Line 17 – Page 56, Line 4.
[34] Abdelilah, Column 8, Lines 36-55.
[35] Abdelilah, Column 8, Lines 36-55.

Abdelilah's server modem includes a recording application program. Kaler fails to remedy the deficiencies of Abdelilah. As such, the combination of Abdelilah and Kaler clearly fails to disclose, for example, at least "wherein utilizing the recording module of the modem comprises executing a recording application program on the computer," as recited in Appellant's dependent claim 31.

Further, with regard to the Appellant's dependent claim 32, the Examiner's Answer states that "Examiner respectfully submits that the Examiner has addressed the Appellant's arguments in the Examiner's response (I)(a) and (I)(b) hereinabove."[36] The Appellant notes that the Examiner's arguments in section (I)(a) and (I)(b) of the Examiner's Answer have been addressed above in section I.A. and I.C. of the Appellant's Reply. As such, for at least the reasons set forth above and in the Appellant's Brief on Appeal, the Appellant respectfully submits that Appellant's dependent claim 32 is not unpatentable over Abdelilah in view of Kaler and is allowable.

Also, the Examiner's Answer again alleges that Kaler's mere disclosure of an animated application model remedies the deficiencies of Abdelilah to teach a software component that is the same as a software component of the modem being modeled.[37] However, the cited section of Kaler merely discloses that Kaler's animated application model is capable of generating diagrams of the functionally active structure of the application,[38] which fails to teach a software component that is the same as a software

[36] Examiner's Answer, Page 57, Lines 19-20.
[37] Examiner's Answer, Page 59, Line 10 – Page 60, Line 2.
[38] Kaler, Column 32, Lines 28-34.

component of the modem being modeled. Nowhere in the combination of Abdelilah and Kaler is there any disclosure of a software component that is the same as a software component of the modem being modeled. As such, the combination of Abdelilah and Kaler cannot teach "wherein the model of the modem comprises a software component that is the same as a software component of the modem being modeled," as set forth in Appellant's dependent claims 35 and 44.

Additionally, regarding Appellant's dependent claim 36, the Examiner explicitly acknowledges that "Abdelilah **does not explicitly disclose** that the **model of the modem comprises a hardware component** that is the **same as a hardware component of the modem**; and **executing the model of the modem comprises utilizing the hardware component**."[39] The Examiner also alleges that "Kaler discloses **a model of an application comprises a software component that is the same as a software component of the application...and executing the model of the application comprises utilizing the software component**."[40] Even if Kaler's model of an application comprised a software component that is the same as a software component of the application (which, as discussed above, Kaler clearly fails to disclose), one of ordinary skill in the art would readily understand that modeling software components is different than modeling hardware components. The Appellant notes that nowhere in the combination of Abdelilah and Kaler is there any disclosure that Kaler's Animated Application Model comprises a hardware component that is the

[39] Examiner's Answer, Page 61, Lines 12-15.
[40] Examiner's Answer, Page 61, Lines 15-17 and 21, and Page 62, Line 1.

same as a hardware component of the modem and that the execution of the Animated Application Model comprises utilizing the hardware component. As such, the combination of Abdelilah and Kaler cannot teach "wherein: **the model of the modem comprises a hardware component that is the same as a hardware component of the modem**; and executing the model of the modem comprises **utilizing the hardware component**," as recited in Appellant's dependent claim 36.

Accordingly, the Appellant submits that claims 20-26, 28-38, 42-44 and 46 are allowable over the references cited in the Final Office Action at least for the above reasons. The Appellant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 20-26, 28-38, 42-44 and 46.

III. Claim 45 Is Not Obvious Over Abdelilah in view of Kaler and further in view of Read

The Appellant stands by the arguments made in the corresponding section of the Brief on Appeal.

Accordingly, the Appellant submits that claim 45 is allowable over the reference cited in the Final Office Action at least for the above reasons. The Appellant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claim 45.

CONCLUSION

For at least the foregoing reasons, the Appellant submits that claims 9-13 and 19-46 are in condition for allowance. Reversal of the Examiner's rejection and issuance of a patent on the application are therefore requested.

The Commissioner is hereby authorized to charge additional fee(s) or credit overpayment(s) to the deposit account of McAndrews, Held & Malloy, Account № 13-0017.

Respectfully submitted,

Date: 10-DEC-2010

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(PHS)

EXHIBIT

fully

ful·ly *adv* \'fu̇(l)-lē\

Definition of FULLY

1 : in a full manner or degree : COMPLETELY

2 : at least <*fully* nine tenths of us>

See Usage Discussion at PLENTY

See fully defined for English-language learners »

Examples of FULLY

He *fully* recovered from the operation.

They will never *fully* appreciate their luck.

The house is *fully* furnished.

When will the tree be *fully* grown?

First Known Use of FULLY

before 12th century

Related to FULLY

Synonyms: all, all of, all over, altogether, clean, completely, dead, enough, entire, entirely, even, exactly, fast, flat, full, heartily, out, perfectly, plumb [*chiefly dialect*], quite, soundly, thoroughly, through and through, totally, utterly, well, wholly, wide, all the way, at length, down the line, down to the ground, for fair, in whole, to bits, to pieces, to the hilt, to the max

Antonyms: half, halfway, incompletely, part, partially, partly

(+) more

Rhymes with FULLY

bully, gully, pull, pulley, woolly

Browse

Next Word in the Dictionary: fulmar
Previous Word in the Dictionary: full-timer
All Words Near: fully